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L12	(Boenisch-H.IN.)	25	L12
L11	Bruess-M.IN.	20	L11
L10	L9 AND choline	2	L10
L9	Okuda-Takashi.IN.	122	L9
L8	Haga-Tatsuya.IN.	4	L8
<i>DB=USPT,PGPB; PLUR=YES; OP=ADJ</i>			
L7	L6 AND choline transporter	3	L7
L6	((530/300  530/350 )!.CCLS. )	11919	L6
L5	(530/300,350.CCLS.)	0	L5
L4	L3 AND choline transporter	7	L4
L3	((435/69.1  435/325 )!.CCLS. )	17631	L3
L2	((534/69.1  534/325 )!.CCLS. )	0	L2
L1	(435/69.1,325.CCLS.)	0	L1

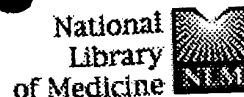
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L11	L9 AND choline transporter	7	L11
L10	L9 AND high affinity choline transporter	2	L10
L9	((435/69.1  435/325 )!.CCLS. )	17631	L9
L8	(435/69.1,325.CCLS.)	0	L8
L7	L6 AND high affinity choline transporter	2	L7
L6	L5 AND high affinity	131	L6
L5	L4 AND transporter	192	L5
L4	L2 AND choline	761	L4
L3	L2 AND choline-transporter	0	L3
L2	((536/23.1  536/23.4  536/23.5 )!.CCLS. )	14080	L2
L1	(536/23.1,23.4,23.5.CCLS.)	0	L1

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**Short-Term Adolescent Nicotine Exposure has Immediate and Persistent Effects on Cholinergic Systems: Critical Periods, Patterns of Exposure, Dose Thresholds.**  
 Neuropsychopharmacology. 2003 Jun 4 [Epub ahead of print]  
 PMID: 12784097 [PubMed - as supplied by publisher]
- ☐ 2: [O'Regan S, Meunier FM.](#) [Related Articles, Links](#)  
**Selection and characterization of the choline transport mutation suppressor from Torpedo electric lobe, CTL1.**  
 Neurochem Res. 2003 Apr;28(3-4):551-5.  
 PMID: 12675144 [PubMed - indexed for MEDLINE]
- ☐ 3: [Okuda T, Haga T.](#) [Related Articles, Links](#)  
**High-affinity choline transporter.**  
 Neurochem Res. 2003 Apr;28(3-4):483-8. Review.  
 PMID: 12675135 [PubMed - indexed for MEDLINE]
- ☐ 4: [Kristofikova Z, Platilova V, Klaschka J.](#) [Related Articles, Links](#)  
**Age- and sex-dependent effects of ethanol on hippocampal hemicholinium-3 sensitive choline carriers during postnatal development of rats.**  
 Neurochem Res. 2003 Apr;28(3-4):397-405.  
 PMID: 12675122 [PubMed - indexed for MEDLINE]
- ☐ 5: [Pfeil U, Lips KS, Eberling L, Grau V, Haberberger RV, Kummer W.](#) [Related Articles, Links](#)  
**Expression of the high-affinity choline transporter, CHT1, in the rat trachea.**  
 Am J Respir Cell Mol Biol. 2003 Apr;28(4):473-7.  
 PMID: 12654636 [PubMed - indexed for MEDLINE]
- ☐ 6: [Song P, Sekhon HS, Proskocil B, Blusztajn JK, Mark GP, Spindel ER.](#) [Related Articles, Links](#)  
**Synthesis of acetylcholine by lung cancer.**  
 Life Sci. 2003 Mar 28;72(18-19):2159-68.  
 PMID: 12628474 [PubMed - indexed for MEDLINE]
- ☐ 7: [Fujii T, Okuda T, Haga T, Kawashima K.](#) [Related Articles, Links](#)  
**Detection of the high-affinity choline transporter in the MOLT-3 human leukemic T-cell line.**  
 Life Sci. 2003 Mar 28;72(18-19):2131-4.  
 PMID: 12628469 [PubMed - indexed for MEDLINE]
- ☐ 8: [Kawashima K, Fujii T.](#) [Related Articles, Links](#)  
**The lymphocytic cholinergic system and its biological function.**  
 Life Sci. 2003 Mar 28;72(18-19):2101-9. Review.  
 PMID: 12628464 [PubMed - indexed for MEDLINE]

- ☐ **9:** [Pfeil U, Haberberger RV, Lips KS, Eberling L, Grau V, Kummer W.](#) Related Articles, Links  
 **Expression of the high-affinity choline transporter CHT1 in epithelia.**  
Life Sci. 2003 Mar 28;72(18-19):2087-90.  
PMID: 12628461 [PubMed - indexed for MEDLINE]
- ☐ **10:** [Allen DD, Lockman PR, Roder KE, Dwoskin LP, Crooks PA.](#) Related Articles, Links  
 **Active transport of high-affinity choline and nicotine analogs into the central nervous system by the blood-brain barrier choline transporter.**  
J Pharmacol Exp Ther. 2003 Mar;304(3):1268-74.  
PMID: 12604705 [PubMed - indexed for MEDLINE]
- ☐ **11:** [Gilissen C, de Groot TJ, Bronfman F, van Leuven F, Verbruggen AM, Bormans GM.](#) Related Articles, Links  
 **Evaluation of 18F-FA-4 and 11C-pipzA-4 as radioligands for the in vivo evaluation of the high-affinity choline uptake system.**  
J Nucl Med. 2003 Feb;44(2):269-75.  
PMID: 12571220 [PubMed - indexed for MEDLINE]
- ☐ **12:** [Haberberger RV, Pfeil U, Lips KS, Kummer W.](#) Related Articles, Links  
 **Expression of the high-affinity choline transporter, CHT1, in the neuronal and non-neuronal cholinergic system of human and rat skin.**  
J Invest Dermatol. 2002 Oct;119(4):943-8.  
PMID: 12406342 [PubMed - indexed for MEDLINE]
- ☐ **13:** [Guermonprez L, O'Regan S, Meunier FM, Morot-Gaudry-Talamain Y.](#) Related Articles, Links  
 **The neuronal choline transporter CHT1 is regulated by immunosuppressor-sensitive pathways.**  
J Neurochem. 2002 Aug;82(4):874-84.  
PMID: 12358793 [PubMed - indexed for MEDLINE]
- ☐ **14:** [Meunier FM, O'Regan S.](#) Related Articles, Links  
 **Expression of CTL1 in myelinating structures of Torpedo marmorata.**  
Neuroreport. 2002 Sep 16;13(13):1617-20.  
PMID: 12352613 [PubMed - indexed for MEDLINE]
- ☐ **15:** [Okuda T, Okamura M, Kaitsuka C, Haga T, Gurwitz D.](#) Related Articles, Links  
 **Single nucleotide polymorphism of the human high affinity choline transporter alters transport rate.**  
J Biol Chem. 2002 Nov 22;277(47):45315-22. Epub 2002 Sep 16.  
PMID: 12237312 [PubMed - indexed for MEDLINE]
- ☐ **16:** [Crowe AP, Lockman PR, Abbruscato TJ, Allen DD.](#) Related Articles, Links  
 **Novel choline transport characteristics in Caco-2 cells.**  
Drug Dev Ind Pharm. 2002 Aug;28(7):773-81.  
PMID: 12236063 [PubMed - indexed for MEDLINE]
- ☐ **17:** [Che YH, Yamashita T, Higuchi H, Tohyama M.](#) Related Articles, Links  
 **Changes in mRNA for choline transporter-like protein following facial nerve transection.**  
Brain Res Mol Brain Res. 2002 May 30;101(1-2):122-5.  
PMID: 12007839 [PubMed - indexed for MEDLINE]
- ☐ **18:** [Katz-Brull R, Seger D, Rivenson-Segal D, Rushkin E, Degani H.](#) Related Articles, Links  
 **Metabolic markers of breast cancer: enhanced choline metabolism and reduced choline-ether-phospholipid synthesis.**  
Cancer Res. 2002 Apr 1;62(7):1966-70.  
PMID: 11929812 [PubMed - indexed for MEDLINE]

☐ 19: Lips KS, Pfeil U, Haberberger R.V, Kummer W.

[Related Articles](#), [Links](#)



Localisation of the high-affinity choline transporter-1 in the rat skeletal motor unit.

Cell Tissue Res. 2002 Mar;307(3):275-80. Epub 2002 Feb 14.  
PMID: 11904763 [PubMed - indexed for MEDLINE]

☐ 20: Ebel H, Hollstein M, Gunther T.

[Related Articles](#), [Links](#)



Role of the choline exchanger in Na(+)-independent Mg(2+) efflux from rat erythrocytes.

Biochim Biophys Acta. 2002 Feb 15;1559(2):135-44.  
PMID: 11853680 [PubMed - indexed for MEDLINE]

☐ 21: Wengelnik K, Vidal V, Ancelin ML, Cathiard AM, Morgat JL, Kocken CH, Calas M, Herrera S, Thomas AW, Vial HJ.

[Related Articles](#), [Links](#)



A class of potent antimalarials and their specific accumulation in infected erythrocytes.

Science. 2002 Feb 15;295(5558):1311-4.  
PMID: 11847346 [PubMed - indexed for MEDLINE]

☐ 22: Kobayashi Y, Okuda T, Fujioka Y, Matsumura G, Nishimura Y, Haga T.

[Related Articles](#), [Links](#)



Distribution of the high-affinity choline transporter in the human and macaque monkey spinal cord.

Neurosci Lett. 2002 Jan 4;317(1):25-8.  
PMID: 11750988 [PubMed - indexed for MEDLINE]

☐ 23: Apparsundaram S, Ferguson SM, Blakely RD.

[Related Articles](#), [Links](#)



Molecular cloning and characterization of a murine hemicholinium-3-sensitive choline transporter.

Biochem Soc Trans. 2001 Nov;29(Pt 6):711-6.  
PMID: 11709061 [PubMed - indexed for MEDLINE]

☐ 24: Wille S, Szekeres A, Majdic O, Prager E, Staffler G, Stockl J, Kunthalert D, Prieschl EE, Baumruker T, Bartscher H, Zlabinger GJ, Knapp W, Stockinger H.

[Related Articles](#), [Links](#)



Characterization of CDw92 as a member of the choline transporter-like protein family regulated specifically on dendritic cells.

J Immunol. 2001 Nov 15;167(10):5795-804.  
PMID: 11698453 [PubMed - indexed for MEDLINE]

☐ 25: Bussiere M, Vance JE, Campenot RB, Vance DE.

[Related Articles](#), [Links](#)



Compartmentalization of choline and acetylcholine metabolism in cultured sympathetic neurons.

J Biochem (Tokyo). 2001 Oct;130(4):561-8.  
PMID: 11574076 [PubMed - indexed for MEDLINE]

☐ 26: Chen SR, Pan HL.

[Related Articles](#), [Links](#)



Spinal endogenous acetylcholine contributes to the analgesic effect of systemic morphine in rats.

Anesthesiology. 2001 Aug;95(2):525-30.  
PMID: 11506129 [PubMed - indexed for MEDLINE]

☐ 27: Misawa H, Nakata K, Matsuura J, Nagao M, Okuda T, Haga T.

[Related Articles](#), [Links](#)



Distribution of the high-affinity choline transporter in the central nervous system of the rat.


Neuroscience. 2001;105(1):87-98.  
PMID: 11483303 [PubMed - indexed for MEDLINE]

Friedrich A, George RL, Bridges CC, Prasad PD, Ganapathy V.


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 28:


Transport of choline and its relationship to the expression of the organic cation transporters in a rat brain microvessel endothelial cell line (RBE4).  
Biochim Biophys Acta. 2001 Jun 6;1512(2):299-307.  
PMID: 11406107 [PubMed - indexed for MEDLINE]

 29: [Wang Y, Cao Z, Newkirk RF, Ivy MT, Townsel JG.](#)[Related Articles, Links](#)


Molecular cloning of a cDNA for a putative choline co-transporter from Limulus CNS.  
Gene. 2001 May 2;268(1-2):123-31.  
PMID: 11368908 [PubMed - indexed for MEDLINE]

 30: [Murakami H, Sawada N, Koyabu N, Ohtani H, Sawada Y.](#)[Related Articles, Links](#)


Characteristics of choline transport across the blood-brain barrier in mice: correlation with in vitro data.  
Pharm Res. 2000 Dec;17(12):1526-30.  
PMID: 11303963 [PubMed - indexed for MEDLINE]

 31: [Xie Z, Fang M, Bankaitis VA.](#)[Related Articles, Links](#)


Evidence for an intrinsic toxicity of phosphatidylcholine to Sec14p-dependent protein transport from the yeast Golgi complex.  
Mol Biol Cell. 2001 Apr;12(4):1117-29.  
PMID: 11294911 [PubMed - indexed for MEDLINE]

 32: [Ivy MT, Newkirk RF, Karim MR, Mtshali CM, Townsel JG.](#)[Related Articles, Links](#)


Hemicholinium-3 mustard reveals two populations of cycling choline cotransporters in Limulus.  
Neuroscience. 2001;102(4):969-78.  
PMID: 11182258 [PubMed - indexed for MEDLINE]

 33: [Nuccio ML, McNeil SD, Ziemak MJ, Hanson AD, Jain RK, Selvaraj G.](#)[Related Articles, Links](#)


Choline import into chloroplasts limits glycine betaine synthesis in tobacco: analysis of plants engineered with a chloroplastic or a cytosolic pathway.  
Metab Eng. 2000 Oct;2(4):300-11.  
PMID: 11120642 [PubMed - indexed for MEDLINE]

 34: [Okuda T, Haga T.](#)[Related Articles, Links](#)


Functional characterization of the human high-affinity choline transporter.  
FEBS Lett. 2000 Nov 3;484(2):92-7.  
PMID: 11068039 [PubMed - indexed for MEDLINE]

 35: [Apparsundaram S, Ferguson SM, George AL Jr, Blakely RD.](#)[Related Articles, Links](#)


Molecular cloning of a human, hemicholinium-3-sensitive choline transporter.  
Biochem Biophys Res Commun. 2000 Oct 5;276(3):862-7.  
PMID: 11027560 [PubMed - indexed for MEDLINE]

 36: [Jensen TH, Neville M, Rain JC, McCarthy T, Legrain P, Rosbash M.](#)[Related Articles, Links](#)

Identification of novel *Saccharomyces cerevisiae* proteins with nuclear export activity: cell cycle-regulated transcription factor ace2p shows cell cycle-independent nucleocytoplasmic shuttling.  
Mol Cell Biol. 2000 Nov;20(21):8047-58.  
PMID: 11027275 [PubMed - indexed for MEDLINE]


 37: [Goettl VM, Wemlinger TA, Fong TG, Neff NH, Hadjiconstantinou](#)[Related Articles, Links](#)

M.

-  Retinal cholinergic and dopaminergic deficits of aged rats are improved following treatment with GM1 ganglioside.  
Brain Res. 2000 Sep 15;877(1):1-6.  
PMID: 10980236 [PubMed - indexed for MEDLINE]


☐ 38: Trauth JA, McCook EC, Seidler FJ, Slotkin TA.

Related Articles, Links

-  Modeling adolescent nicotine exposure: effects on cholinergic systems in rat brain regions.  
Brain Res. 2000 Aug 4;873(1):18-25.  
PMID: 10915806 [PubMed - indexed for MEDLINE]


☐ 39: Bronfman FC, Tesseur I, Hofker MH, Havekens LM, Van Leuven E.

Related Articles, Links

-  No evidence for cholinergic problems in apolipoprotein E knockout and apolipoprotein E4 transgenic mice.  
Neuroscience. 2000;97(3):411-8.  
PMID: 10828523 [PubMed - indexed for MEDLINE]


☐ 40: O'Regan S, Traffort E, Ruat M, Cha N, Compaore D, Meunier EM.

Related Articles, Links

-  An electric lobe suppressor for a yeast choline transport mutation belongs to a new family of transporter-like proteins.  
Proc Natl Acad Sci U S A. 2000 Feb 15;97(4):1835-40.  
PMID: 10677542 [PubMed - indexed for MEDLINE]


☐ 41: Okuda T, Haga T, Kanai Y, Endou H, Ishihara T, Katsura I.

Related Articles, Links

-  Identification and characterization of the high-affinity choline transporter.  
Nat Neurosci. 2000 Feb;3(2):120-5.  
PMID: 10649566 [PubMed - indexed for MEDLINE]


☐ 42: Nau-Wagner G, Boch J, Le Good JA, Bremer E.

Related Articles, Links

-  High-affinity transport of choline-O-sulfate and its use as a compatible solute in bacillus subtilis  
Appl Environ Microbiol. 1999 Feb;65(2):560-8.  
PMID: 9925583 [PubMed]


☐ 43: Sawin S, Brodish P, Carter CS, Stanton ME, Lau C.

Related Articles, Links

-  Development of cholinergic neurons in rat brain regions: dose-dependent effects of propylthiouracil-induced hypothyroidism.  
Neurotoxicol Teratol. 1998 Nov-Dec;20(6):627-35.  
PMID: 9831124 [PubMed - indexed for MEDLINE]


☐ 44: Ando S, Tanaka Y, Waki H, Kon K, Iwamoto M, Fukui F.

Related Articles, Links

-  Gangliosides and sialylcholesterol as modulators of synaptic functions.  
Ann N Y Acad Sci. 1998 Jun 19;845:232-9.  
PMID: 9668357 [PubMed - indexed for MEDLINE]


☐ 45: Gyllys KH, Abdalah I, Jenden DJ.

Related Articles, Links

-  Selectivity of hemicholinium mustard, an affinity ligand, for the high-affinity choline transport system.  
Neuropharmacology. 1997 Nov-Dec;36(11-12):1741-6.  
PMID: 9517446 [PubMed - indexed for MEDLINE]

☐ 46: Beeri R, Le Novere N, Mervis R, Huberman T, Grauer E, Changeux JP, Soreq H.

Related Articles, Links

-  Enhanced hemicholinium binding and attenuated dendrite branching in cognitively impaired acetylcholinesterase-transgenic mice.

J Neurochem. 1997 Dec;69(6):2441-51.  
PMID: 9375677 [PubMed - indexed for MEDLINE]

☐ 47: Riley SP, Talbot NJ, Ahmed MJ, Jouhal K, Hendry BM.

[Related Articles](#), [Links](#)



Characterization of human erythrocyte choline transport in chronic renal failure.

Nephrol Dial Transplant. 1997 Sep;12(9):1921-7.  
PMID: 9306344 [PubMed - indexed for MEDLINE]

☐ 48: Vogelsberg V, Fong TG, Neff NH, Hadjiconstantinou M.

[Related Articles](#), [Links](#)



Cholinergic deficits in aged rat spinal cord: restoration by GM1 ganglioside.

Brain Res. 1997 Jul 4;761(2):250-6.  
PMID: 9252023 [PubMed - indexed for MEDLINE]

☐ 49: Ullrich KJ, Rumrich G.

[Related Articles](#), [Links](#)



Luminal transport system for choline<sup>+</sup> in relation to the other organic cation transport systems in the rat proximal tubule. Kinetics, specificity: alkyl/arylamines, alkylamines with OH, O, SH, NH<sub>2</sub>, ROCO, RSCO and H<sub>2</sub>PO<sub>4</sub>-groups, methylaminostyryl, rhodamine, acridine, phenanthrene and cyanine compounds.

Pflugers Arch. 1996 Jul;432(3):471-85.  
PMID: 8766007 [PubMed - indexed for MEDLINE]

☐ 50: Bissette G, Seidler FJ, Nemeroff CB, Slotkin TA.

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High affinity choline transporter status in Alzheimer's disease tissue from rapid autopsy.

Ann N Y Acad Sci. 1996 Jan 17;777:197-204. Review.  
PMID: 8624084 [PubMed - indexed for MEDLINE]

☐ 51: Van der Aa EM, Wouterse AC, Copius Peereboom-Stegeman JH, Russel FG.

[Related Articles](#), [Links](#)



Inhibition of choline uptake in syncytial microvillus membrane vesicles of human term placenta. Specificity and nature of interaction.

Biochem Pharmacol. 1995 Nov 27;50(11):1873-8.  
PMID: 8615867 [PubMed - indexed for MEDLINE]

☐ 52: Barnwell LF, Chaudhuri G, Townsel JG.

[Related Articles](#), [Links](#)



Cloning and sequencing of a cDNA encoding a novel member of the human brain GABA/noradrenaline neurotransmitter transporter family.

Gene. 1995 Jul 4;159(2):287-8.  
PMID: 7622069 [PubMed - indexed for MEDLINE]

☐ 53: Matsushita M, Nikawa J.

[Related Articles](#), [Links](#)



Isolation and characterization of a SCT1 gene which can suppress a choline-transport mutant of *Saccharomyces cerevisiae*.

J Biochem (Tokyo). 1995 Feb;117(2):447-51.  
PMID: 7608137 [PubMed - indexed for MEDLINE]

☐ 54: Li Z, Brendel M.

[Related Articles](#), [Links](#)



Sensitivity to nitrogen mustard in *Saccharomyces cerevisiae* is independently determined by regulated choline permease and DNA repair.

Mutat Res. 1994 Sep;315(2):139-45.  
PMID: 7520996 [PubMed - indexed for MEDLINE]

☐ 55: Grassl SM.

[Related Articles](#), [Links](#)




Choline transport in human placental brush-border membrane vesicles.

Biochim Biophys Acta. 1994 Aug 24;1194(1):203-13.



PMID: 8075137 [PubMed - indexed for MEDLINE]


 **56:** Slotkin TA, Nemeroff CB, Bissette G, Seidler FJ.

Related Articles, Links

**Overexpression of the high affinity choline transporter in cortical regions affected by Alzheimer's disease. Evidence from rapid autopsy studies.**

J Clin Invest. 1994 Aug;94(2):696-702.

PMID: 8040324 [PubMed - indexed for MEDLINE]


 **57:** McMaster CR, Bell RM.

Related Articles, Links

**Phosphatidylcholine biosynthesis via the CDP-choline pathway in *Saccharomyces cerevisiae*. Multiple mechanisms of regulation.**

J Biol Chem. 1994 May 20;269(20):14776-83.

PMID: 8182083 [PubMed - indexed for MEDLINE]

 **58:** Ferguson SS, Collier B.

Related Articles, Links

**Stereoselectivity of the inhibition of [3H]hemicholinium-3 binding to the sodium-dependent high-affinity choline transporter by the enantiomers of alpha- and beta-methylcholine.**

J Neurochem. 1994 Apr;62(4):1449-57.

PMID: 8133274 [PubMed - indexed for MEDLINE]

 **59:** Rada PV, Mark GP, Hoebel BG.

Related Articles, Links

**Effects of supplemental choline on extracellular acetylcholine in the nucleus accumbens during normal behavior and pharmacological acetylcholine depletion.**

Synapse. 1994 Mar;16(3):211-8.

PMID: 8197583 [PubMed - indexed for MEDLINE]


 **60:** Samejima M, Happe HK, Murrin LC, Pfeiffer RF, Ebadi M.

Related Articles, Links

**Distribution of cholinergic and dopaminergic receptors in rainbow trout pineal gland.**

J Pineal Res. 1994 Jan;16(1):37-43.

PMID: 8158522 [PubMed - indexed for MEDLINE]

 **61:** Li Z, Brendel M.

Related Articles, Links

**Co-regulation with genes of phospholipid biosynthesis of the CTR/HNM1-encoded choline/nitrogen mustard permease in *Saccharomyces cerevisiae*.**

Mol Gen Genet. 1993 Dec;241(5-6):680-4.

PMID: 8264542 [PubMed - indexed for MEDLINE]


 **62:** Rylett RJ, Davis W, Walters SA.

Related Articles, Links

**Modulation of high-affinity choline carrier activity following incubation of rat hippocampal synaptosomes with hemicholinium-3.**

Brain Res. 1993 Oct 29;626(1-2):184-9.

PMID: 8281429 [PubMed - indexed for MEDLINE]


 **63:** Zahalka EA, Seidler FJ, Slotkin TA.

Related Articles, Links

**Dexamethasone treatment in utero enhances neonatal cholinergic nerve terminal development in rat brain.**

Res Commun Chem Pathol Pharmacol. 1993 Aug;81(2):191-8.

PMID: 8210698 [PubMed - indexed for MEDLINE]

 **64:** Vial HJ, Ancelin ML, Elabbadi N, Gumila C, Bonnet H, Jeong YH, Philippot J, Calas M, Portefaix P, Piquet G, et al.

Related Articles, Links

**The design of original antimalarial drugs. An example of phospholipid metabolism.**

Parassitologia. 1993 Jul;35 Suppl:125-7. Review.

PMID: 8233602 [PubMed - indexed for MEDLINE]

☐ **65:** Patel PJ, Messer WS Jr, Hudson RA.

[Related Articles](#), [Links](#)



**Inhibition and inactivation of presynaptic cholinergic markers using redox-reactive choline analogs.**

J Med Chem. 1993 Jun 25;36(13):1893-901.

PMID: 8515426 [PubMed - indexed for MEDLINE]

☐ **66:** Kaplan CP, Porter RK, Brand MD.

[Related Articles](#), [Links](#)



**The choline transporter is the major site of control of choline oxidation in isolated rat liver mitochondria.**

FEBS Lett. 1993 Apr 19;321(1):24-6.

PMID: 8467907 [PubMed - indexed for MEDLINE]

☐ **67:** Van Winkle LJ, Campione AL, Mann DE, Wasserlauf HG.

[Related Articles](#), [Links](#)



**The cation receptor subsite of the choline transporter in preimplantation mouse conceptuses resembles a cation receptor subsite of several amino acid transporters.**

Biochim Biophys Acta. 1993 Feb 23;1146(1):38-44.

PMID: 8443225 [PubMed - indexed for MEDLINE]

☐ **68:** Andre B, Hein C, Grenson M, Jauniaux JC.

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**Cloning and expression of the UGA4 gene coding for the inducible GABA-specific transport protein of Saccharomyces cerevisiae.**

Mol Gen Genet. 1993 Feb;237(1-2):17-25.

PMID: 8455553 [PubMed - indexed for MEDLINE]

☐ **69:** Zahalka EA, Seidler FJ, Lappi SE, Yanai J, Slotkin TA.

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**Differential development of cholinergic nerve terminal markers in rat brain regions: implications for nerve terminal density, impulse activity and specific gene expression.**

Brain Res. 1993 Jan 22;601(1-2):221-9.

PMID: 8431769 [PubMed - indexed for MEDLINE]

☐ **70:** Roberts E, Tamaru M.

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**The ligand binding site of the synaptosomal choline transporter: a provisional model based on inhibition studies.**

Neurochem Res. 1992 May;17(5):509-28.

PMID: 1528357 [PubMed - indexed for MEDLINE]

☐ **71:** Pittel Z, Heldman E, Rubinstein R, Cohen S.

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**Inhibition of choline efflux results in enhanced acetylcholine synthesis and release in the guinea-pig corticocerebral synaptosomes.**

Neurochem Int. 1992 Feb;20(2):219-27.

PMID: 1284802 [PubMed - indexed for MEDLINE]

☐ **72:** Vial HJ, Angelin ML, Elabbadi N, Calas M, Cordinas G, Girai L.

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**Basic biochemical investigations as rationale for the design of original antimalarial drugs. An example of phospholipid metabolism.**

Mem Inst Oswaldo Cruz. 1992;87 Suppl 3:251-61. Review.

PMID: 1343697 [PubMed - indexed for MEDLINE]

☐ **73:** Knipper M, Kahle C, Breer H.

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**Purification and reconstitution of the high affinity choline transporter.**

Biochim Biophys Acta. 1991 Jun 18;1065(2):107-13.

PMID: 1905572 [PubMed - indexed for MEDLINE]

☐ **74:** Noguchi S, Higashi K, Kawamura M.

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**A possible role of the beta-subunit of (Na,K)-ATPase in facilitating correct**



assembly of the alpha-subunit into the membrane.  
J Biol Chem. 1990 Sep 15;265(26):15991-5.  
PMID: 2168428 [PubMed - indexed for MEDLINE]

☐ 75: [Knipper M, Boekhoff I, Breer H.](#)

[Related Articles, Links](#)



Isolation and reconstitution of the high-affinity choline carrier.  
FEBS Lett. 1989 Mar 13;245(1-2):235-7.  
PMID: 2924923 [PubMed - indexed for MEDLINE]

☐ 76: [Rylett RJ.](#)

[Related Articles, Links](#)



Affinity labelling and identification of the high-affinity choline carrier from synaptic membranes of Torpedo electromotor nerve terminals with [3H]choline mustard.  
J Neurochem. 1988 Dec;51(6):1942-5.  
PMID: 3183670 [PubMed - indexed for MEDLINE]

☐ 77: [O'Regan S.](#)

[Related Articles, Links](#)



Binding of [3H]hemicholinium-3 to the high-affinity choline transporter in electric organ synaptosomal membranes.  
J Neurochem. 1988 Dec;51(6):1682-8.  
PMID: 3183657 [PubMed - indexed for MEDLINE]

☐ 78: [Meyer EM, Cooper JR.](#)

[Related Articles, Links](#)

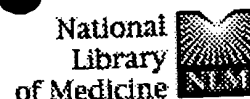


High-affinity choline transport in proteoliposomes derived from rat cortical synaptosomes.  
Science. 1982 Aug 27;217(4562):843-5.  
PMID: 7100928 [PubMed - indexed for MEDLINE]

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**High-affinity choline transporter.**

Neurochem Res. 2003 Apr;28(3-4):483-8. Review.

PMID: 12675135 [PubMed - indexed for MEDLINE]

☐ 2: [Pfeil U, Lips KS, Eberling L, Grau V, Haberberger RV, Kummer W.](#)
[Related Articles, Links](#)

**Expression of the high-affinity choline transporter, CHT1, in the rat trachea.**

Am J Respir Cell Mol Biol. 2003 Apr;28(4):473-7.

PMID: 12654636 [PubMed - indexed for MEDLINE]

☐ 3: [Fujii T, Okuda T, Haga T, Kawashima K.](#)
[Related Articles, Links](#)

**Detection of the high-affinity choline transporter in the MOLT-3 human leukemic T-cell line.**

Life Sci. 2003 Mar 28;72(18-19):2131-4.

PMID: 12628469 [PubMed - indexed for MEDLINE]

☐ 4: [Pfeil U, Haberberger RV, Lips KS, Eberling L, Grau V, Kummer W.](#)
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**Expression of the high-affinity choline transporter CHT1 in epithelia.**

Life Sci. 2003 Mar 28;72(18-19):2087-90.

PMID: 12628461 [PubMed - indexed for MEDLINE]

☐ 5: [You M, Xuan X, Tsuji N, Kanio T, Taylor D, Suzuki N, Fujisaki K.](#)
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**Identification and molecular characterization of a chitinase from the hard tick *Haemaphysalis longicornis*.**

J Biol Chem. 2003 Mar 7;278(10):8556-63. Epub 2002 Dec 26.

PMID: 12502707 [PubMed - indexed for MEDLINE]

☐ 6: [Haberberger RV, Pfeil U, Lips KS, Kummer W.](#)
[Related Articles, Links](#)

**Expression of the high-affinity choline transporter, CHT1, in the neuronal and non-neuronal cholinergic system of human and rat skin.**

J Invest Dermatol. 2002 Oct;119(4):943-8.

PMID: 12406342 [PubMed - indexed for MEDLINE]

☐ 7: [Guernonprez L, O'Regan S, Meunier FM, Morot-Gaudry-Talamain Y.](#)
[Related Articles, Links](#)

**The neuronal choline transporter CHT1 is regulated by immunosuppressor-sensitive pathways.**

J Neurochem. 2002 Aug;82(4):874-84.

PMID: 12358793 [PubMed - indexed for MEDLINE]

☐ 8: [Okuda T, Okamura M, Kaitsuka C, Haga T, Gurwitz D.](#)
[Related Articles, Links](#)

**Single nucleotide polymorphism of the human high affinity choline transporter alters transport rate.**

J Biol Chem. 2002 Nov 22;277(47):45315-22. Epub 2002 Sep 16.

PMID: 12237312 [PubMed - indexed for MEDLINE]

☐ 9: Kim HB, An CS.

[Related Articles](#), [Links](#)



Differential expression patterns of an acidic chitinase and a basic chitinase in the root nodule of *Elaeagnus umbellata*.

Mol Plant Microbe Interact. 2002 Mar;15(3):209-15.  
PMID: 11952123 [PubMed - indexed for MEDLINE]

☐ 10: Lips KS, Pfeil U, Haberberger RV, Kummer W.

[Related Articles](#), [Links](#)



Localisation of the high-affinity choline transporter-1 in the rat skeletal motor unit.

Cell Tissue Res. 2002 Mar;307(3):275-80. Epub 2002 Feb 14.  
PMID: 11904763 [PubMed - indexed for MEDLINE]

☐ 11: Langer RC, Li F, Popov V, Kurosky A, Vinetz JM.

[Related Articles](#), [Links](#)



Monoclonal antibody against the *Plasmodium falciparum* chitinase, PfCHT1, recognizes a malaria transmission-blocking epitope in *Plasmodium gallinaceum* ookinetes unrelated to the chitinase PgCHT1.

Infect Immun. 2002 Mar;70(3):1581-90.  
PMID: 11854247 [PubMed - indexed for MEDLINE]

☐ 12: Apparsundaram S, Ferguson SM, Blakely RD.

[Related Articles](#), [Links](#)



Molecular cloning and characterization of a murine hemicholinium-3-sensitive choline transporter.

Biochem Soc Trans. 2001 Nov;29(Pt 6):711-6.  
PMID: 11709061 [PubMed - indexed for MEDLINE]

☐ 13: Friedrich A, George RL, Bridges CC, Prasad PD, Ganapathy V.

[Related Articles](#), [Links](#)



Transport of choline and its relationship to the expression of the organic cation transporters in a rat brain microvessel endothelial cell line (RBE4).

Biochim Biophys Acta. 2001 Jun 6;1512(2):299-307.  
PMID: 11406107 [PubMed - indexed for MEDLINE]

☐ 14: Wang Y, Cao Z, Newkirk RF, Ivy MT, Townsel JG.

[Related Articles](#), [Links](#)



Molecular cloning of a cDNA for a putative choline co-transporter from *Limulus* CNS.

Gene. 2001 May 2;268(1-2):123-31.  
PMID: 11368908 [PubMed - indexed for MEDLINE]

☐ 15: Okuda T, Haga T.

[Related Articles](#), [Links](#)



Functional characterization of the human high-affinity choline transporter.

FEBS Lett. 2000 Nov 3;484(2):92-7.  
PMID: 11068039 [PubMed - indexed for MEDLINE]

☐ 16: Apparsundaram S, Ferguson SM, George AL Jr, Blakely RD.

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Molecular cloning of a human, hemicholinium-3-sensitive choline transporter.

Biochem Biophys Res Commun. 2000 Oct 5;276(3):862-7.  
PMID: 11027560 [PubMed - indexed for MEDLINE]

☐ 17: Johnstone CN, Tebbutt NC, Abud HE, White SJ, Stenvers KL, Hall NE, Cody SH, Whitehead RH, Catimel B, Nice EC, Burgess AW, Heath JK.

[Related Articles](#), [Links](#)











Characterization of mouse A33 antigen, a definitive marker for basolateral surfaces of intestinal epithelial cells.

Am J Physiol Gastrointest Liver Physiol. 2000 Sep;279(3):G500-10.  
PMID: 10960348 [PubMed - indexed for MEDLINE]

☐ 18: Okuda T, Haga T, Kanai Y, Endou H, Ishihara T, Katsura I.

[Related Articles](#), [Links](#)

-  Identification and characterization of the high-affinity choline transporter.  
Nat Neurosci. 2000 Feb;3(2):120-5.  
PMID: 10649566 [PubMed - indexed for MEDLINE]
- ☐ 19: Katevuo K, Imhof BA, Boyd R, Chidgey A, Bean A, Dunon D, Gobel TW, Vainio O. [Related Articles](#), [Links](#)  
ChT1, an Ig superfamily molecule required for T cell differentiation.  
J Immunol. 1999 May 15;162(10):5685-94.  
PMID: 10229800 [PubMed - indexed for MEDLINE]
-  ☐ 20: Chretien I, Marcuz A, Courtet M, Katevuo K, Vainio O, Heath JK, White SJ, Du Pasquier L. [Related Articles](#), [Links](#)  
CTX, a Xenopus thymocyte receptor, defines a molecular family conserved throughout vertebrates.  
Eur J Immunol. 1998 Dec;28(12):4094-104.  
PMID: 9862345 [PubMed - indexed for MEDLINE]
-  ☐ 21: Shakarian AM, Dwyer DM. [Related Articles](#), [Links](#)  
The Ld Cht1 gene encodes the secretory chitinase of the human pathogen *Leishmania donovani*.  
Gene. 1998 Feb 27;208(2):315-22.  
PMID: 9524285 [PubMed - indexed for MEDLINE]
-  ☐ 22: Kong F, Chen CH, Cooper MD. [Related Articles](#), [Links](#)  
Thymic function can be accurately monitored by the level of recent T cell emigrants in the circulation.  
Immunity. 1998 Jan;8(1):97-104.  
PMID: 9462515 [PubMed - indexed for MEDLINE]
-  ☐ 23: de la Vega H, Specht CA, Semino CE, Robbins PW, Eichinger D, Caplivski D, Ghosh S, Samuelson J. [Related Articles](#), [Links](#)  
Cloning and expression of chitinases of *Entamoeba*.  
Mol Biochem Parasitol. 1997 Apr;85(2):139-47.  
PMID: 9106188 [PubMed - indexed for MEDLINE]
-  ☐ 24: McCreath KJ, Specht CA, Liu Y, Robbins PW. [Related Articles](#), [Links](#)  
Molecular cloning of a third chitinase gene (CHT1) from *Candida albicans*.  
Yeast. 1996 Apr;12(5):501-4.  
PMID: 8740424 [PubMed - indexed for MEDLINE]
-  ☐ 25: Raac AJ, Flengsrud R, Sletten K. [Related Articles](#), [Links](#)  
Chymotrypsin isoenzymes in Atlantic cod; differences in kinetics and substrate specificity.  
Comp Biochem Physiol B Biochem Mol Biol. 1995 Oct;112(2):393-8.  
PMID: 7584866 [PubMed - indexed for MEDLINE]
-  ☐ 26: McCreath KJ, Specht CA, Robbins PW. [Related Articles](#), [Links](#)  
Molecular cloning and characterization of chitinase genes from *Candida albicans*.  
Proc Natl Acad Sci U S A. 1995 Mar 28;92(7):2544-8.  
PMID: 7708682 [PubMed - indexed for MEDLINE]

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CAS REGISTRY NO. (RN): 392945-96-9  
SEQUENCE LENGTH (SQL): 1743  
MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Patent  
DATE (DATE): 31 Jan 2002  
DEFINITION (DEF): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*  
SOURCE: Homo sapiens.  
ORGANISM (ORGN): Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
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MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Patent  
DATE (DATE): 31 Jan 2002  
DEFINITION (DEF): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*

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SEQUENCE LENGTH (SQL): 1731  
MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Patent  
DATE (DATE): 31 Jan 2002  
DEFINITION (DEF): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*

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CAS REGISTRY NO. (RN): 388546-92-7  
SEQUENCE LENGTH (SQL): 610  
MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Primates  
DATE (DATE): 23 Jan 2002  
DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*  
, exon 1 and joined mRNA.  
SOURCE: human.  
ORGANISM (ORGN): Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
Hominidae; Homo  
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AUTHOR (AU): Wieland,A.; Bonisch,H.; Bruss,M.  
TITLE (TI): Molecular cloning of the human and murine high affinity  
choline transporters and characterization of the human

JOURNAL (SO): gene structure  
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LOCUS (LOC): HSA308378 GenBank (R)  
 GenBank ACC. NO. (GBN): AJ308378  
 GenBank VERSION (VER): AJ308378.1 GI:18375493  
 CAS REGISTRY NO. (RN): 388546-91-6  
 SEQUENCE LENGTH (SQL): 1178  
 MOLECULE TYPE (CI): DNA; linear  
 DIVISION CODE (CI): Primates  
 DATE (DATE): 23 Jan 2002  
 DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*

L2 ANSWER 126 OF 143 GENBANK.RTM. COPYRIGHT 2003

LOCUS (LOC): HSA308384 GenBank (R)  
 GenBank ACC. NO. (GBN): AJ308384  
 GenBank VERSION (VER): AJ308384.1 GI:18369775  
 CAS REGISTRY NO. (RN): 387812-77-3  
 SEQUENCE LENGTH (SQL): 2239  
 MOLECULE TYPE (CI): DNA; linear  
 DIVISION CODE (CI): Primates  
 DATE (DATE): 23 Jan 2002  
 DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*

SOURCE: human.  
 ORGANISM (ORGN): Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 664 a 442 c 440 g 693 t

REFERENCE: 1 (sites)  
 AUTHOR (AU): Wieland, A.; Bonisch, H.; Bruss, M.  
 TITLE (TI): Molecular cloning of the human and murine high affinity  
 choline transporters and characterization of the human  
 gene structure

JOURNAL (SO): Unpublished  
 REFERENCE: 2 (bases 1 to 2239)  
 AUTHOR (AU): Bruess, M.  
 TITLE (TI): Direct Submission  
 JOURNAL (SO): Submitted (23-JAN-2001) Bruess M., University of Bonn,  
 Pharmacology and Toxicology, Reuterstr. 2b, D-53113  
 Bonn, GERMANY

# FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..2239	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="2q11-13"
intron	<1..791	/gene="CHT1" /number=8
gene	1..2239	/gene="CHT1"
exon	792..>2239	/gene="CHT1" /number=9 /usedin=AJ308378:CHT1-CDS /usedin=AJ308377:CHT1-mRNA

# SEQUENCE (SEQ):

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1 ctaagtgcct tccttgacc acccccacg cccccaaca ggccccagtg tgtgtgctcc
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121 ttgtgttttc tgtccctgtg ctagtttgct gaggatgatg gcttccacct tcatccatgt
181 ctctgcaaag gaatgatctt attcctttt atggccacat agtattccat ggtatacatg
241 tgccacattt tctttatcca gtctatcact gatgggcatt tgcgttggtt ccatgacttt
301 gttattgtaa atagtgtgc aataaacgta tgtgtgcatg tgtcttttca agagcaccag
361 aaggtggtta gtttaaggat ggtagcactt ctacaaagag ataaacatag ggatggccta
  
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421 tgctctgtca atgccacata agaactgttc cctaatatgt aaagtgagga aatcttcct  
481 tgctttatta tacctccctg acatgtgt agctcatcct gcctttgccc ctacattc  
541 aggaaaaggc tcaggtggcc tgtgtgtcat acatctggta cacagaaacc cctccaaag  
601 gtccaccag gaagtcacct tgattgtttg ctttgggtgc ttagctgta gttggtttt  
661 cccatagatt gagcacattt gaaccaggag aattctttag accagtttg aagcaaaaa  
721 tatgtctcat tctttgccta aatgagccaa gacactgtgc aaaaagctga cactgtggca  
781 atttcttaca ggcttcggac aaagaaatcg tttgggttat gcgaatcaca gtgtttgtg  
841 ttggagcatc tgcaacagcc atggccttgc tgacgaaaac tgtgtatggg ctctggtacc  
901 tcagttctga ccttgtttac atcgttatct tccccagct gctttgtgta ctctttgta  
961 agggaaccaa cacctatggg gccgtggcag gttatgtttc tggcctcttc ctgagaataa  
1021 ctggagggga gccatatctg tatcttcagc ccttgatctt ctaccctggc tattaccctg  
1081 atgataatgg tatatataat cagaaatttc catttaaac acttgccatg gttacatcat  
1141 tcttaaccaa catttgcatc tcctatctag ccaagtatct atttgaaagt ggaaccttgc  
1201 cacctaaatt agatgtattt gatgtgttg ttgcaagaca cagtgaagaa aacatggata  
1261 agacaattct tgtcaaaaat gaaaatatta aattagatga acttgcactt gtgaagccac  
1321 gacagagcat gacctcagc tcaactttca ccaataaaga ggccttcctt gatgttgatt  
1381 ccagtcacga agggctctggg actgaagata atttacagt accccatcta aataaaatac  
1441 tgcttttgca aacagaacac tgtaatagg tagttctgga gagatggat gcagcataca  
1501 aaaatatatt aaaaatataa acaatgttca ggagagtaaa aattcatata aagtgcatt  
1561 gcacaaatac aagccaagct agaaggaaac acctatgaaa gcaacaactt tgtttctcat  
1621 ccatagtagt attgattttg atgctagata gttttgctag gtataaaaaa taagtaaagt  
1681 tccacttaga gaacaaaggg ccaaataag tttttatatt tgttatgata aaaggaagta  
1741 gatgtgaaaa agcctaagaa aaaggaaatt ggacagtttt gatacaaaact ttgtttgcta  
1801 atgactgat gagtctagtt tcattatagc acgaagctat gagaataact tcagtcactc  
1861 ccttgaatgg tgcaatgaat taaccagctg atttttctta gtgtgatgat taacccttc  
1921 tttcatgttc tgagctataa catttgctga atatgcaatt tgttattctt ttattaatgg  
1981 catgtaatat tctgagcacg ggcaaaagaaa acacacaaaa aattatgtat tggcatttat  
2041 ttatgtgcaa ggtgatagga aaactgaatc catctttgta gaagagcact gggctaattt  
2101 gtatgtttcc atagctacta tatgcataaa caacagtacc tgaaggatta ttaagcaacc  
2161 ttaaagcaat aagttcatta aacagaaggt aataggaaga acagtacatt tttgtcttta  
2221 tctcaagtat ataaagttt

L2 ANSWER 127 OF 143 GENBANK.RTM. COPYRIGHT 2003

LOCUS (LOC): HSA308383 GenBank (R)  
GenBank ACC. NO. (GBN): AJ308383  
GenBank VERSION (VER): AJ308383.1 GI:18369774  
CAS REGISTRY NO. (RN): 387812-76-2  
SEQUENCE LENGTH (SQL): 1657  
MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Primates  
DATE (DATE): 23 Jan 2002  
DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*  
, exon 8.  
human.  
SOURCE:  
ORGANISM (ORGN): Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
Hominidae; Homo  
NUCLEIC ACID COUNT (NA): 529 a 304 c 287 g 537 t  
REFERENCE:  
1 (sites)  
AUTHOR (AU): Wieland,A.; Bonisch,H.; Bruss,M.  
TITLE (TI): Molecular cloning of the human and murine high affinity  
choline transporters and characterization of the human  
gene structure  
JOURNAL (SO): Unpublished  
REFERENCE:  
2 (bases 1 to 1657)  
AUTHOR (AU): Bruess,M.  
TITLE (TI): Direct Submission  
JOURNAL (SO): Submitted (23-JAN-2001) Bruess M., University of Bonn,  
Pharmacology and Toxicology, Reuterstr. 2b, D-53113  
Bonn, GERMANY

FEATURES (FEAT):	Location	Qualifier
Feature Key		
source	1..1657	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="2q11-13"
gene	1..1657	/gene="CHT1"
intron	<1..886	/gene="CHT1" /number=7
exon	887..1104	/gene="CHT1" /number=8

intron

1105...&gt;1657

/usedin=AJ308378:CHT1-CDS  
 /usedin=AJ308377:CHT1-mRNA  
 /gene="CHT1"  
 /number=8

## SEQUENCE (SEQ):

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1 tagatacaca ttcttgtttg gtatttctgt atcataaatc tcagtaaggc cacaaagtgc
61 tgcattgtaag caggctttgt gacaattgta atagaaaatg aggggaagaaa aaatggtagg
121 atccaaagag aacaattcct atttgggtcca atgatcatga tattaaaaaa gttcagcaaa
181 taaaaagccg actatgctaa tgaacattta aggattccat agttcttcaa cacatgctac
241 aactaaccag taaagaagct atgtattcaa agataaatct gtgtttcaag tcttcttacc
301 ctaccacaca ccaaaacttc ctgaaaattt cagccacatg actgtaattt ttattcaata
361 aaaagggact gttcttaacc tagtgaaatt ctatgcaatg tggaaaatagg agaaaagtaa
421 tgctgaggca gcttcaaaac caagtttatg tacagagaga tgatggctga gaatagccct
481 actattgtct ttcttcaatt acacatgaat aactgagcct taaagaagaa acagtgagtg
541 tcccaccaca ttccaagtgt gttgaaggaa tactctagaa ttctgtttat gagagtttgt
601 ttctatgat tctaggcaat gtaacaccat cattgcagaa aggaaatata tatcttacca
661 ccagtgtctg tgcaggcatt gtgaataaca ctaactataa ccaatacctt ttagaagcca
721 agagatataa gacatttcca cttgaccagc acatggactt cacaccagac taatgtatat
781 gattctgagt ttatttcaaa acaaccctagt aaataggatg accccagatg gataaagaac
841 atttgggtcc ttgggtggtta taatgggtgt tgattctgtt caacagactg gaaccagact
901 gcatatgggc ttccagatcc caagactaca gaagaggcag acatgatttt accaatttgt
961 ctgcagtatc tctgccctgt gtatatttct ttctttggtc ttgggtgcagt ttctgtctgt
1021 gttatgtcat cagcagattc ttccatcttg tcagcaagtt ccatgtttgc acggaacatc
1081 taccagcttt ccttcagaca aaatgtaaga acagtttctt tcaacctgat catttactag
1141 cattgtctct gcatgcttct gatgttgtat ttgttgtata tacagtatta tatatttatt
1201 aatattctat gttaaatctg actgtacttt aagcatacga gattaaataa caaattatac
1261 ctatgctgaa tggatgctat cagtacctgt tcttattcat gtcaatacta aagggaacaa
1321 atcaatataa ttatttccca agaggtacag tcacagggtc atcatttaac ctttttgtct
1381 ttctgatgaa agagtaatga aacctaaact attcagcaaa acttttagta taattaaatt
1441 ctctatgaca ctggaaaatc ttggtggaag cagggcattg taagttgttc gacacgtatt
1501 ttgttaactt ctgaactgtt ttatacttgc actccaaagt ccacctttgc aggaagatat
1561 cctctcaatt tgattttctt tattgaatca aagtggctgc aaaacagcat gcttctttgg
1621 ttgattaaag cttttcctct ctctaggttt tagttac

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L2 ANSWER 128 OF 143 GENBANK.RTM. COPYRIGHT 2003

LOCUS (LOC): HSA308382 GenBank (R)  
 GenBank ACC. NO. (GBN): AJ308382  
 GenBank VERSION (VER): AJ308382.1 GI:18369773  
 CAS REGISTRY NO. (RN): 387812-75-1  
 SEQUENCE LENGTH (SQL): 1467  
 MOLECULE TYPE (CI): DNA; linear  
 DIVISION CODE (CI): Primates  
 DATE (DATE): 23 Jan 2002  
 DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*  
 , exon 7.

## SOURCE:

ORGANISM (ORGN): human.  
 Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 398 a 326 c 284 g 459 t

## REFERENCE:

1 (sites)  
 AUTHOR (AU): Wieland, A.; Bonisch, H.; Bruss, M.  
 TITLE (TI): Molecular cloning of the human and murine high affinity  
 choline transporters and characterization of the human  
 gene structure

JOURNAL (SO): Unpublished

REFERENCE: 2 (bases 1 to 1467)

AUTHOR (AU): Bruess, M.

TITLE (TI): Direct Submission

JOURNAL (SO): Submitted (23-JAN-2001) Bruess M., University of Bonn,  
 Pharmacology and Toxicology, Reuterstr. 2b, D-53113  
 Bonn, GERMANY

## FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..1467	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="2q11-13"
gene	1..1467	/gene="CHT1"
intron	<1..662	/gene="CHT1"

exon	663..816	/gene="CHT1" /number=7 /usedin=AJ308378:CHT1-CDS /usedin=AJ308377:CHT1-mRNA
intron	817..>1467	/gene="CHT1" /number=7

SEQUENCE (SEQ):

SEQUENCE (SEQ):

1	tgagaatatt	ttatgatggt	tagaccacc	aatgataaac	aaattgaagg	cctctggggt
61	agtttaataa	cagttcaaaa	taggtaaatt	aatgaaaaga	aataattgct	gtatgtaatt
121	atagagaaaa	cttcaggaaa	ttctgcataa	ttgaaagttg	atgatacatt	gtcttagttc
181	agttgggtaa	caaagcatca	taaacggagt	ggcttataaa	caacacagat	ttatttttca
241	cagtttttca	catggctggg	aagtccaaga	tcaagggtgc	ggcagattca	ctgcctgggtg
301	aggattcgca	tcctcataga	aggcaccttc	ttgctgcctc	ctcacatggt	ggaaggaaaa
361	aaactccttt	gactctcttt	tataaggact	ccaccctcat	gggctaatac	tctcccaaag
421	ttgccaaact	gatacctaata	accatcacct	tggggatcaa	aatttcagtg	tatgaattta
481	gggggaacat	aaacatcaga	tcatagcaaa	cataattgata	ctaattgata	tttgtggcta
541	catgccacat	tttttttact	acttctaaagt	tgtacttagg	cctattctaa	atgtgattgc
601	aataaaactc	tttaaaaaaa	tgaatagatg	tttgctcttc	catccttggtg	tttcccgcac
661	agatgctggg	tggaatccca	tggcaagcat	actttcagag	ggttctctct	tcttctctcag
721	ccacctatgc	tcaagtgtctg	tccttcctgg	cagctttcgg	gtgcctgggtg	atggccatcc
781	cagccatact	cattggggcc	attggagcat	caacaggtaa	atctcttgca	gcttcaccac
841	atgtgccagt	tagtttacca	atccccacc	agacaccctt	ctgtcccact	cccccttttc
901	ctccacatag	tgaattcttt	ctcaccacat	ctcatatctat	agatttgtaa	tagcattcag
961	taaatcgtaa	tatagttcag	cggcctccat	tttttttttt	tttttttttt	tagtagagac
1021	gggggtttcat	catgttggtc	aggctgggtc	caaactcctg	acctcaggtg	atccatctgc
1081	ctcgggtctcc	caaagtgtctg	gaattatagg	tgtgagctac	tgcgccccagc	ctccaatttt
1141	tttgattgct	cactccacta	tgaaacattg	gtgagcacac	cctctctccca	gttttggtat
1201	atttatccat	tgtttatatg	cactcctgtc	agcaggtgat	ctcaaccaag	gtgcattgctg
1261	acatcatctg	gggaatgggtg	gggagatctt	ttaaaaatac	ggatatgtgg	cctacttcac
1321	aggaatttta	ttttaataac	tgaagataga	gatgggcact	agtgttcttt	taaaaccctt
1381	aggtgagttg	agagccagag	ttgagagtca	caggcttaga	gacgtttacc	tgtcatcctc
1441	atgacctccc	taaagatcac	tttgaac			

L2 ANSWER 129 OF 143 GENBANK.RTM. COPYRIGHT 2003

LOCUS (LOC): HSA308381 GenBank (R)  
GenBank ACC. NO. (GBN): AJ308381  
GenBank VERSION (VER): AJ308381.1 GI:18369772  
CAS REGISTRY NO. (RN): 387812-74-0  
SEQUENCE LENGTH (SQL): 736  
MOLECULE TYPE (CI): DNA; linear  
DIVISION CODE (CI): Primates  
DATE (DATE): 23 Jan 2002  
DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
\*\*\*5'-UTR\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*

SOURCE: human.  
ORGANISM (ORGN): Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
Hominidae; Homo

NUCLEIC ACID COUNT (NA): 191 a 148 c 197 g 200 t  
REFERENCE: 1 (sites)  
AUTHOR (AU): Wieland,A.; Bonisch,H.; Bruss,M.  
TITLE (TI): Molecular cloning of the human and murine high affinity  
choline transporters and characterization of the human  
gene structure  
JOURNAL (SO): Unpublished  
REFERENCE: 2 (bases 1 to 736)  
AUTHOR (AU): Bruess,M.  
TITLE (TI): Direct Submission  
JOURNAL (SO): Submitted (23-JAN-2001) Bruess M., University of Bonn,  
Pharmacology and Toxicology, Reuterstr. 2b, D-53113  
Bonn, GERMANY

FEATURES (FEAT):

FEATURES (FEAT):		
Feature Key	Location	Qualifier
source	1..736	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="2q11-13"
gene	1..736	/gene="CHT1"
intron	<1..34	/gene="CHT1"

exon 35..178 /number=5  
 /gene="CHT1"  
 /number=6  
 /usedin=AJ308378:CHT1-CDS  
 /usedin=AJ308377:CHT1-mRNA  
 intron 179..>736 /gene="CHT1"  
 /number=6

SEQUENCE (SEQ):

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1  tcgcctaggg ctccagtgtc actttctgtt gcagtggatc agcgtccctt ttgcattgtc
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121 gctgggaact gttgactcat ctgaagtcta ctcttggtct gatagttttc tgttgttggt
181 aagtaatgct cttacctgaa gaatgtgatt taattgttcc tgaaatcaaa tttgttttca
241 cgattttcat attcatagta aaaaaatgtg cttgtgggct catggccatt tctgaattga
301 ggactctcta tcgggagggt ggagccaggg ccggactatc gtggctggca gtgtcagggt
361 ggagaacaaa tgaggccctg aggggacagc ataagggtgt ctgggtgggt ggtcctcatt
421 tccgttgtga tgtaagtcaa ggaataacat gccctacccc caggactttc cccaacctga
481 aggcaaaacc ttgtaaaggc tttattttgt gttttgaatt aaggcatgaa acccaactta
541 tgaaataagt ctctcattca ctcttgaatt acagagtaag tgaattagta gtgctagagg
601 ccctaagtga ggcagggttg aaagggacat gtcactcagg aaagatgcca agagagaggg
661 cctcaggagc cagaggaagc ttgaaaacag gcagaacttt gggcaaaagg tgcaggcact
721 ttgcaggagg acatgg
  
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L2 ANSWER 130 OF 143 GENBANK.RTM. COPYRIGHT 2003

LOCUS (LOC): HSA308380 GenBank (R)  
 GenBank ACC. NO. (GBN): AJ308380  
 GenBank VERSION (VER): AJ308380.1 GI:18369771  
 CAS REGISTRY NO. (RN): 387812-73-9  
 SEQUENCE LENGTH (SQL): 1308  
 MOLECULE TYPE (CI): DNA; linear  
 DIVISION CODE (CI): Primates  
 DATE (DATE): 23 Jan 2002  
 DEFINITION (DEF): Homo sapiens partial CHT1 gene for \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*  
 , exon 5.

SOURCE: human.  
 ORGANISM (ORGN): Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;  
 Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini;  
 Hominidae; Homo

NUCLEIC ACID COUNT (NA): 415 a 234 c 224 g 435 t

REFERENCE: 1 (sites)  
 AUTHOR (AU): Wieland,A.; Bonisch,H.; Bruss,M.  
 TITLE (TI): Molecular cloning of the human and murine high affinity  
 choline transporters and characterization of the human  
 gene structure  
 JOURNAL (SO): Unpublished  
 REFERENCE: 2 (bases 1 to 1308)  
 AUTHOR (AU): Bruess,M.  
 TITLE (TI): Direct Submission  
 JOURNAL (SO): Submitted (23-JAN-2001) Bruess M., University of Bonn,  
 Pharmacology and Toxicology, Reuterstr. 2b, D-53113  
 Bonn, GERMANY

FEATURES (FEAT):

Feature Key	Location	Qualifier
source	1..1308	/organism="Homo sapiens" /db-xref="taxon:9606" /chromosome="2" /map="2q11-13"
gene	1..1308	/gene="CHT1"
intron	<1..578	/gene="CHT1" /number=4
exon	579..727	/gene="CHT1" /number=5 /usedin=AJ308378:CHT1-CDS /usedin=AJ308377:CHT1-mRNA
intron	728..>1308	/gene="CHT1" /number=5

SEQUENCE (SEQ):

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121 ccatcaagat ttgtgagtga gtacatactg tgaagtgcac aacagtgaaa tcacctaaca
  
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L1 ANSWER 134 OF 389 CAPLUS COPYRIGHT 2003 ACS  
AN 1989:35650 CAPLUS  
DN 110:35650

TI Affinity labeling and identification of the high-affinity choline carrier  
from synaptic membranes of torpedo electromotor nerve terminals with  
[3H]choline mustard  
AU Rylett, R. Jane  
CS Abt. Neurochem., Max-Planck-Inst. Biophys. Chem., Goettingen, Fed. Rep.  
Ger.  
SO Journal of Neurochemistry (1988), 51(6), 1942-5  
CODEN: JONRA9; ISSN: 0022-3042  
DT Journal  
LA English

L1 ANSWER 135 OF 389 CAPLUS COPYRIGHT 2003 ACS  
AN 1988:523033 CAPLUS  
DN 109:123033  
TI Pharmacological characterization of \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\* in primary neuronal cultures in rat  
brain

AU Kelley, M. C.; Raizada, M. K.; Meyer, E. M.  
CS Sch. Med., Univ. Florida, Gainesville, FL, 32610, USA  
SO Neuropharmacology (1988), 27(8), 837-42  
CODEN: NEPHBW; ISSN: 0028-3908  
DT Journal  
LA English

L1 ANSWER 136 OF 389 CAPLUS COPYRIGHT 2003 ACS  
AN 1982:521150 CAPLUS  
DN 97:121150  
TI High-affinity choline transport in proteoliposomes derived from rat  
cortical synaptosomes

AU Meyer, Edwin M.; Cooper, Jack R.  
CS Sch. Med., Yale Univ., New Haven, CT, 06510, USA  
SO Science (Washington, DC, United States) (1982), 217(4562), 843-5  
CODEN: SCIEAS; ISSN: 0036-8075  
DT Journal  
LA English

L1 ANSWER 137 OF 389 CONFSCI COPYRIGHT 2003 CSA  
AN 2002:70432 CONFSCI  
DN 02-070432  
TI Localisation of the \*\*\*high\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\* -1 in rat skeletal muscle and spinal cord

AU Lips, K.S.; Pfeil, U.; Haberberger, R.V.; Kummer, W.  
SO 11th International Symposium on Cholinergic Mechanisms, c/o Kenes  
International, P.O. Box 50006, Tel Aviv 61500, Israel; phone:  
972-3-5140018; fax: 972-3-5140077; email: cholinergic@kenes.com; URL:  
www.kenes.com.  
Meeting Info.: 000 6152: 11th International Symposium on Cholinergic  
Mechanisms Function and Dysfunction & 2nd Misrahi Symposium on  
Neurobiology (0006152). St Moritz (Switzerland). 5-9 May 2002. KENES  
International.

DT Conference  
FS DCCP  
LA English

L1 ANSWER 138 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN ABU08980 Protein DGENE  
TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
for preventing, treating or ameliorating neurological and cognitive  
disorders such as Alzheimer's or Parkinson's disease -

IN Wu D; Gu Y; Millard W J; He Y  
PA (UYFL) UNIV FLORIDA.  
PI US 6500643 B1 20021231 20p  
AI US 2000-657252 20000907  
PRAI US 2000-657252 20000907  
DT Patent  
LA English  
OS 2003-361535 [34]  
CR N-PSDB: ABX94339  
DESC Human choline acetyltransferase.

L1 ANSWER 139 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN ABU08979 Protein DGENE  
TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
for preventing, treating or ameliorating neurological and cognitive

disorders such as Alzheimer's or Parkinson's disease -  
IN Wu D; Gu Y; Millard W J;  
PA (UYFL) UNIV FLORIDA.  
PI US 6500643 B1 20021231 20p  
AI US 2000-657252 20000907  
PRAI US 2000-657252 20000907  
DT Patent  
LA English  
OS 2003-361535 [34]  
CR N-PSDB: ABX94338  
DESC Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*, HACT.

L1 ANSWER 140 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN AAB74666 Protein DGENE  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

IN Haga T; Okuda T  
PA (NISC-N) JAPAN SCI & TECHNOLOGY CORP.  
PI WO 2001016315 A1 20010308 90p  
AI WO 2000-JP5545 20000818  
PRAI JP 1999-240642 19990827  
JP 1999-368991 19991227  
DT Patent  
LA Japanese  
OS 2001-226688 [23]  
CR N-PSDB: AAF81713  
DESC Mouse \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\* protein.

L1 ANSWER 141 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN AAB74665 Protein DGENE  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

IN Haga T; Okuda T  
PA (NISC-N) JAPAN SCI & TECHNOLOGY CORP.  
PI WO 2001016315 A1 20010308 90p  
AI WO 2000-JP5545 20000818  
PRAI JP 1999-240642 19990827  
JP 1999-368991 19991227  
DT Patent  
LA Japanese  
OS 2001-226688 [23]  
CR N-PSDB: AAF81712  
DESC Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\* protein.

L1 ANSWER 142 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN AAB74664 Protein DGENE  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

IN Haga T; Okuda T  
PA (NISC-N) JAPAN SCI & TECHNOLOGY CORP.  
PI WO 2001016315 A1 20010308 90p  
AI WO 2000-JP5545 20000818  
PRAI JP 1999-240642 19990827  
JP 1999-368991 19991227  
DT Patent  
LA Japanese  
OS 2001-226688 [23]  
CR N-PSDB: AAF81711  
DESC Rat \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\* protein.

L1 ANSWER 143 OF 389 DGENE (C) 2003 THOMSON DERWENT  
AN AAB74663 Protein DGENE  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

IN Haga T; Okuda T  
PA (NISC-N) JAPAN SCI & TECHNOLOGY CORP. 90p  
PI WO 2001016315 A1 20010308  
AI WO 2000-JP5545 20000818  
PRAI JP 1999-240642 19990827  
JP 1999-368991 19991227  
DT Patent  
LA Japanese  
OS 2001-226688 [23]  
CR N-PSDB: AAF81710  
DESC C. elegans \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\* protein.

L2 ANSWER 100 OF 143 DGENE (C) 2003 THOMSON DERWENT  
TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
for preventing, treating or ameliorating neurological and cognitive  
disorders such as Alzheimer's or Parkinson's disease -

L2 ANSWER 101 OF 143 DGENE (C) 2003 THOMSON DERWENT  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

L2 ANSWER 102 OF 143 DGENE (C) 2003 THOMSON DERWENT  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

L2 ANSWER 103 OF 143 DGENE (C) 2003 THOMSON DERWENT  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

L2 ANSWER 104 OF 143 DGENE (C) 2003 THOMSON DERWENT  
TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
\*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
Alzheimer's disease and screening promoters as drugs for treating  
Alzheimer's disease -

L2 ANSWER 105 OF 143 FEDRIP COPYRIGHT 2003 NTIS  
TI Heptocellular Transport in Health and Disease

L2 ANSWER 106 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*

L2 ANSWER 107 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*

L2 ANSWER 108 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*

L2 ANSWER 109 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): Human \*\*\*high\*\*\* \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
\*\*\*transporter\*\*\*

L2 ANSWER 110 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): Molecular control of ciliary neuron development: BMPs  
and downstream transcriptional control in the  
parasympathetic lineage  
TITLE (TI): Direct Submission

L2 ANSWER 111 OF 143 GENBANK.RTM. COPYRIGHT 2003

TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 112 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 113 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 114 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 115 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): Single Nucleotide Polymorphism of the Human  
 \*\*\*High\*\*\* \*\*\*Affinity\*\*\* \*\*\*Choline\*\*\*  
 \*\*\*Transporter\*\*\* Alters Transport Rate  
 TITLE (TI): Direct Submission

L2 ANSWER 116 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 117 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 118 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 119 OF 143 GENBANK.RTM. COPYRIGHT 2003  
 TITLE (TI): \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\*  
 \*\*\*transporter\*\*\*

L2 ANSWER 80 OF 143 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. DUPLICATE 45  
 TI \*\*\*High\*\*\* - \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\*  
 in synaptosomal membranes.

L2 ANSWER 81 OF 143 BIOTECHNO COPYRIGHT 2003 Elsevier science B.V.  
 DUPLICATE  
 TI Isolation and reconstitution of the high-affinity choline carrier

L2 ANSWER 82 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 DUPLICATE 47  
 TI AFFINITY LABELLING AND IDENTIFICATION OF THE HIGH-AFFINITY CHOLINE CARRIER  
 FROM SYNAPTIC MEMBRANES OF TORPEDO ELECTROMOTOR NERVE TERMINALS AND  
 TRITIATED CHOLINE MUSTARD.

L2 ANSWER 83 OF 143 AQUASCI COPYRIGHT (C) 2003 FAO (on behalf of the ASFA  
 Advisory Board). All Rights Reserved. DUPLICATE 48  
 TI Binding of (super(3)H)Hemicholinium-3 to the \*\*\*high\*\*\* -  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* in electric organ  
 synaptosomal membranes.

L2 ANSWER 84 OF 143 SCISEARCH COPYRIGHT 2003 THOMSON ISI  
 TI BINDING OF [H-3]HEMICHOLINIUM-3 TO THE \*\*\*HIGH\*\*\* - \*\*\*AFFINITY\*\*\*  
 \*\*\*CHOLINE\*\*\* \*\*\*TRANSPORTER\*\*\* IN ELECTRIC ORGAN SYNAPTOSOMAL  
 MEMBRANES

L2 ANSWER 85 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI BINDING OF TRITIATED HEMICHOLINIUM-3 TO THE \*\*\*HIGH\*\*\*  
 \*\*\*AFFINITY\*\*\* \*\*\*CHOLINE\*\*\* \*\*\*TRANSPORTER\*\*\* IN ELECTRIC ORGAN  
 SYNAPTOSOMAL MEMBRANES.

- L2 ANSWER 86 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 DUPLICATE 49  
 TI PHARMACOLOGICAL CHARACTERIZATION OF \*\*\*HIGH\*\*\* \*\*\*AFFINITY\*\*\*  
 \*\*\*CHOLINE\*\*\* \*\*\*TRANSPORTERS\*\*\* IN PRIMARY NEURONAL CULTURES IN RAT  
 BRAIN.
- L2 ANSWER 87 OF 143 CAPLUS COPYRIGHT 2003 ACS  
 TI Antigen recognized by monoclonal antibodies to mesencephalic neural crest  
 and to ciliary ganglion neurons is involved in the high affinity choline  
 uptake mechanism in these cells
- L2 ANSWER 88 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 DUPLICATE 50  
 TI CHARACTERIZATION AND ATTEMPTED ISOLATION OF THE \*\*\*HIGH\*\*\* -  
 \*\*\*AFFINITY\*\*\* \*\*\*CHOLINE\*\*\* \*\*\*TRANSPORTER\*\*\* OF TORPEDO  
 ELECTROMOTOR NERVE TERMINALS USING A RADIOACTIVE CHOLINE AZIRIDIUM  
 ANALOGUE.
- L2 ANSWER 89 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 TI IDENTIFICATION OF THE \*\*\*HIGH\*\*\* - \*\*\*AFFINITY\*\*\* \*\*\*CHOLINE\*\*\*  
 \*\*\*TRANSPORTER\*\*\* OF TORPEDO ELECTROMOTOR NERVE TERMINALS USING A  
 TRITIATED CHOLINE MUSTARD LIGAND.
- L2 ANSWER 90 OF 143 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 DUPLICATE 51  
 TI HIGH AFFINITY CHOLINE TRANSPORT IN PROTEO LIPOSOMES DERIVED FROM RAT  
 CORTICAL SYNAPTOSOMES.
- L2 ANSWER 91 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
 for preventing, treating or ameliorating neurological and cognitive  
 disorders such as Alzheimer's or Parkinson's disease -
- L2 ANSWER 92 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
 for preventing, treating or ameliorating neurological and cognitive  
 disorders such as Alzheimer's or Parkinson's disease -
- L2 ANSWER 93 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
 \*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
 Alzheimer's disease and screening promoters as drugs for treating  
 Alzheimer's disease -
- L2 ANSWER 94 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
 \*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
 Alzheimer's disease and screening promoters as drugs for treating  
 Alzheimer's disease -
- L2 ANSWER 95 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
 \*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
 Alzheimer's disease and screening promoters as drugs for treating  
 Alzheimer's disease -
- L2 ANSWER 96 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI New rat and human spinal cord \*\*\*high\*\*\* \*\*\*affinity\*\*\*  
 \*\*\*choline\*\*\* \*\*\*transporters\*\*\*, useful in diagnosis of  
 Alzheimer's disease and screening promoters as drugs for treating  
 Alzheimer's disease -
- L2 ANSWER 97 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
 for preventing, treating or ameliorating neurological and cognitive  
 disorders such as Alzheimer's or Parkinson's disease -
- L2 ANSWER 98 OF 143 DGENE (C) 2003 THOMSON DERWENT  
 TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
 \*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
 for preventing, treating or ameliorating neurological and cognitive  
 disorders such as Alzheimer's or Parkinson's disease -

L2 ANSWER 99 OF 143 DGENE (● 2003 THOMSON DERWENT ●  
TI Novel isolated polynucleotide (I) that encodes \*\*\*high\*\*\*  
\*\*\*affinity\*\*\* \*\*\*choline\*\*\* \*\*\*transporter\*\*\* protein, useful  
for preventing, treating or ameliorating neurological and cognitive  
disorders such as Alzheimer's or Parkinson's disease -  
STN INTERNATIONAL LOGOFF AT 15:27:06 ON 23 JUN 2003